

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No.: RTSP-0161 #2
Inventors: Monia and Cowsert
Serial No.: Not Yet Assigned
Filing Date: Herewith
Examiner: Not Yet Assigned
Group Art Unit: Not Yet Assigned
Title: Antisense Modulation of SMAD5 Expression

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By Deborah Ehret
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Assistant Commissioner for Patents
Washington, DC 20231

Sir:

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 C.F.R. §1.56 and in accordance with 37 C.F.R.
§§1.97-1.98, information relating to the above-identified
application is hereby disclosed. Inclusion of information in
this statement is not to be construed as an admission that this
information is material as that term is defined in 37 C.F.R.
§1.56(b).

(XX) In accordance with §1.97(b), since this Information
Disclosure Statement is being filed either within three
months of the filing date of the above-identified

application, within three months of the date of entry into the national stage of the above identified application as set forth in \$1.491, or before the mailing date of a first Office Action on the merits of the above-identified application, no additional fee is required.

- () In accordance with \$1.97(c), this Information Disclosure Statement is being filed after the period set forth in \$1.97(b) above but before the mailing date of either a Final Action under \$1.113 or a Notice of Allowance under \$1.311, therefore:
- () Certification in Accordance with \$1.97(e) is set forth below; or
- () The fee of \$180.00 as set forth in \$1.17(p) is attached.
- () In accordance with \$1.97(d), this Information Disclosure Statement is being filed after the mailing date of either a Final Action under \$1.113 or a Notice of Allowance under \$1.311 but before the payment of the Issue Fee, therefore included are: Certification in Accordance with \$1.97(e); Petition Requesting Consideration of the Information Disclosure Statement; and the fee of \$130.00 as set forth in \$1.17(i)(1).
- () Copies of each of the references listed on the attached Form PTO-1449 (modified) are enclosed herewith.
- (XX) In accordance with \$1.98(d), copies of some or all of the references listed on the attached Form PTO-1449 (modified)

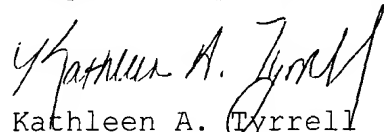
are not enclosed herewith because they were previously submitted to the U.S. Patent and Trademark Office in prior application Serial No. 09/256,492 filed February 23, 1999, for which a claim for priority under 35 U.S.C. §120 has been made in the instant application or were submitted to the U.S. Patent and Trademark Office as the PCT Receiving Office and are referenced in the International Search Report.

Please charge any deficiency or credit any overpayment to Deposit Account No. 50-1619. This form is submitted in duplicate.

() The relevance of the listed references in a foreign language is as stated in the specification at pages @@.

(XX) All listed references are in the English language.

Respectfully submitted,



Kathleen A. Tyrrell
Registration No. 38,350

Date: August 15, 2001

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Sheet 01 of 02

Form PTO-1449 Modified List of Patents and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce Patent and Trademark Office	Docket No. RTSP-0161	Serial No. Not Yet Assigned
	Applicant Monia and Cowser	
	Filing Date Herewith	Group Not Yet Assigned

U. S. PATENT DOCUMENTS

Examiner		Document	Date	Name	Class	Subclass
	AA	5,585,479	12-17-96	Hoke et al.	536	24.5

FOREIGN PATENT DOCUMENTS

Examiner Initial		Document No.	Date	Country	Translation YES NO	

EXAMINER	DATE CONSIDERED
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Form PTO-1449 Modified List of Patents and Publications Cited by Applicant (Use several sheets if necessary) U.S. Department of Commerce		Docket No. RTSP-0161	Serial No. Not Yet Assigned
		Applicant Monia and Cowsert	
		Filing Date Herewith	Group Not Yet Assigned
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
	AA	Heldin et al., "TGF-beta signaling from cell membrane to nucleus through SMAD proteins", <i>Nature</i> 1997 390:465-471	
	AB	Kretzschmar et al., "SMADs:mediators and regulators of TGF-beta signaling", <i>Curr. Opin. Genet. Dev.</i> 1998 8:103-111	
	AC	Nishimura et al., "Smad5 and DPC4 are key molecules in mediating BMP-2-induced osteoblastic differentiation of the pluripotent mesenchymal precursor cell line C2C12", <i>J. Biol. Chem.</i> 1998 273:1872-1879	
	AD	Wrana et al., "TGF-beta receptors and signaling mechanisms", <i>Miner. Electrolyte Metab.</i> 1998 24:120-130	
	AE	Yamamoto et al., "Smad1 and Smad5 act downstream of intracellular signalings of BMP-2 that inhibits myogenic differentiation in C2C12 myoblasts", <i>Biochem. Biophys. Res. Commun.</i> 1997 238:574-580	
	AF	Bruno et al., "The Smad5 Gene Is Involved in the Intracellular Signaling Pathways That Mediate the Inhibitory Effects of Transforming Growth Factor- β on Human Hematopoiesis", <i>Blood</i> 1998 91(6):1917-1923	
	AG	Sanghvi Y.S., <i>Antisense Research and Applications, Chapter 15, Heterocyclic Base Modifications in Nucleic Acids and Their Applications in Antisense Oligonucleotides</i> CRC Press:Boca Raton 1993 273-288	
	AH	Monia et al., "Evaluation of 2'-Modified Oligonucleotides Containing 2'-Deoxy Gaps as Antisense Inhibitors of Gene Expression", <i>J. Biol. Chem.</i> 1993 268(19):14514-14522	
EXAMINER		DATE CONSIDERED	